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Analysis of the Administrative Cost of Present Energy Conservation: A Case Study of Hebei Province

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Abstract

This paper, based on clustering methodology, analyzes the administrative measures taken by Hebei Province to complete the mission of energy conservation in industry since the Eleventh Five-Year Plan. Such measures include three aspects: a series of regulations and projects related to industrial energy conservation implemented by relevant government departments; province-wide conferences specifically about industrial energy conservation held many times; but joint between the provincial government and the key enterprises built to supervise their fulfillment of the objective of industrial energy conservation. This analysis exposes that the remarkable effects of industrial energy conservation of Hebei Province are paid off by vast cost of administrative decision cost, executive cost and organizing cost. To lower the administrative cost of industrial energy conservation, long-term mechanism concerning policies in industry, tax, finance and science & technology should be established.

Keywords: industry; energy conservation; administrative cost; long-term mechanism

1. Introduction

Since the Eleventh Five-Year Plan has been carried out, the government at all levels have made many measures to discover the potential of industrial energy conservation, to weed out backward industrial energy consumption, to encourage sci-tech innovation and improve the utilization ratio of energy so as to fulfill the mission of industrial energy conservation. Focusing on energy conservation, Hebei Province has

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also implemented a set of policies and measures. But beneath the remarkable effects of energy conservation, the large amount of cost should not be ignored as well, especially administrative cost.

This paper is divided into three sections: the target and the effect of industrial energy conservation in "Eleventh Five-Year Plan"; the analysis of administrative cost of industrial energy conservation and the solution to effectively decrease administrative cost of industrial energy conservation in Hebei Province.

2. The Target and the Effect of Industrial Energy Conservation of Hebei Province in "Eleventh Five-Year Plan"

2.1. The Target of Industrial Energy Conservation in "Eleventh Five-Year Plan"

According to the requirements of "The Outline of the Eleventh Five-Year Plan of Heibei National Economy and Social Development", over 25% energy should be saved by the end of the Eleventh Five-Year Plan. Among them, 64,02400 tons of standard coal in steel industry will be saved. By the end of 2010, comprehensive energy consumption of per ton steel should be reduced by 15.79% compared with that of 687.99 kilograms standard coal in 2005; The industrial added-value of per unit product will be increased by 12.28%. The energy consumptoin of gross product per unit of coal enterprise will be decreased by 20% compared with that of 2005. The construction of petroleum and chemical industry will be more reasonable by that time, and the proportion of high energy consuming industry will be somewhat declined. Meanwhile the energy consumption of industrial added value declines by 15%-20% compared with that of 2005. Standard coal consumption for thermal power supply cost 355 grams per kilowatt-hour, a decrease of 15 grams; power consumption of factories being 4.5%, a decrease of 1.4%, line loss rate of 7%, a decrease of 0.18%.

2.2. Effect of Industrial Energy Conservation of Hebei Province since the implementation of Eleventh Five-Year Plan

Hebei is a major coal consuming province, its resources industry accounting for 70% of the whole province's economic aggregate. Through the implementation of the above series of policies, remarkable results was achieved as far as industrial energy saving is concerned. By the end of 2009, with a target of 20% energy conservation goal during the Eleventh Five-Year Period, the progress of cumulative reduction was 84.62%, 4.62% more than the national requirements, with initial evaluation assessment rating of "exceeded".

From 2006 to 2009, the energy consumption GDP was in increasing tendency year by year, its increaseing rate were as follows, 3.09%, 4.02%, 6.29% and 5.02%. In 2009, Hebei province totally implemented 694 items converning energy conservation technical improvement , of which 450 projects would be completed by the end of that year. Accumulation of 5.9 million tons of standard coal in energy conservation is achieved, especially for Double 30 units, which completed the energy conservation task that they promised that year, moreover, most units also reached the goal of three years one year ahead of time, a total conservation of 3.80 million tons of standard coal.

3. Analysis of Administrative Cost of Industrial Energy Conservation in Hebei Province

3.1. Administrative Cost

Administrative cost is the administrative input or resources consumed by government when offering certain public service to society, which is the necessary expenditure for government to implement its

function. The administrative cost includes administrative policy-making cost, administrative implementing cost and administrative organizational cost. The administrative policy-making cost is the internal input of policy activity itself, for example, manpower employed to conduct investigation research and collect information, the numbers of meetings and experts consulted, and then total up relevant material fees, consultation fees, investigation fees and administrative meeting expenses. Administrative implementing cost is the summarization of manpower, material and financial resources during the process of carrying out the administrative policies. Among which administrative implementing cost makes up the greater part. Administrative organizational cost is the summarization of various cost of institutions of government, which mainly includes government's work place, work facilities and salary of government's staff.

3.2. Administrative Cost Analysis of Industrial Energy Conservation

During the Eleventh Five-Year Period, the administrative cost of Hebei is relatively high despite the notable effects achieved in industrial energy conservation.

Firstly, various administrative regulations in promoting industrial energy conservation is applied only to a short-term use, which leads to high administrative policy-making cost. The administrative regulations were limited by short-term characteristics of administrative objective. Incomplete statistics shows that from 2006 to 2009, Hebei put forward 13 regulations, to name a few: "Energy Conservation Regulations in Hebei", "The Decision to Strengthen Implementation of Energy Conservation of People's Government of Hebei", "Comprehensive Implementation Plan of Saving Energy and Reducing Emission of Hebei Province", "Monitoring Method of Energy Conservation of Hebei Province" "Effective Assessment Method of Green Credit Policy of Hebei Province", "Advice on Construction Land of Energy Conservation and Emission Reduction Project", etc. Most of these regulations are specifically made for Eleventh Five Years Plan, and once it finished, new goal of the industrial energy conservation will be put forward. To revise and implement these administrative regulations, a large amount of administrative resources are needed.

Secondly, almost all government functional departments participate in energy conservation activity, which leads to huge administrative cost. To realize industrial energy conservation goal, Hebei province mobilized almost all government functional governments. According to "Comprehensive Implementation Plan of Saving Energy and Reducing Emission of Hebei Province" in 2007, such provincial departments as Provincial Development and Reform Commission, Provincial Environmental Protection Bureau, Department of Construction, Provincial Water Resources Department, Provincial Statistical Bureau, Provincial Department of Land and Resources, Provincial Department of Information Industry (Industry and Information Department), Provincial Finance Office, Provincial Banking Regulatory Bureau, Provincial Industrial and Commercial Bureau, Provincial Bureau of Quality and Technical Supervision, Provincial Department of Finance, Internal Revenue Commission, Provincial Local Tax Bureau, Municipal Government Offices Administration Bureau, Provincial Federation of Industry and Economy, Provincial Department of Science and Technology, and municipal governments are involved in the activities of the industrial energy conservation.

During the Eleventh Five-Year Period, "Six Measures" was put forward in 2006 to facilitate the smooth implementation of industrial energy conservation, and "Ten Measures" was also proposed in 2007 and 2010, respectively. The government establish relations with 221 big and middle sized industrial enterprises to supervise their energy conservation and emission reduction since 2006. And then in 2008, "Double Thirty Project" was initiated as well. Besides, provincial government adopted many ways to organize meetings to decide on how to ensure the realization of industrial energy conservation, in which

relevant provincial leaders participate. So, Hebei province paid much administrative price in the process of ensuring industrial energy conservation.

Thirdly, the professionalized administrative institution set with huge staff team makes industrial administrative organization's high cost exist for a long time. To adapt to industrial energy conservation environment, a Provincial Energy Conservation and Emission Reduction Group was organized, likewise, Energy Bureau by Provincial Development and Reform Commission, Energy Conservation Office by Department of Industry and Information, Energy Statistical Office by Provincial Statistic Bureau. According to the further requirement, energy conservation bureau and energy conservation office will also be set at city/county level, and correspondent administrative formations and professional administrative staff will be equipped accordingly. These units and professional institutions also employed many administrative resources, which increases the cost of energy conservation.

4. Policy Advice on Effectively Reducing the Administrative Cost in Industrial Energy Conservation

4.1. Making Suitable Industrial Policy for Energy Conservation

Industrial policy is the center of policy system in promoting energy conservation and emission reduction. Following steps can be used to make industrial policy: first, we should strive to develop modern service industry, intensified agriculture, advanced manufacturing industry and high and new technology industry; rapidly produce industrial structure which focus on high-value added, low energy conservation, low pollution, increase the proportion of low energy consumption industry, promote economic growth from industrial drive and quantity drive to three industrial coordinated growth, and optimize and upgrade. Second, as for high energy cost industry, strict industry admittance criteria should be made to restrict overtop cost of new construction and energy - wasting project. In the process of production, the main content and criteria of industrial energy conservation should be defined clearly, and the main product and units' output energy of these industries be regulated. At last, those small and medium sized companies, not competent enough to produce qualified products, but waste much energy and pollute environment should be closed; Those enterprises, which produce, sell and use high energy cost products and equipments should be punished severely.

4.2. Making Fiscal Encouragement Policy to Meet Requirements of Energy Conservation

In fiscal expenditure, government should lay down policy to encourage enterprises to produce or use products listed in Catalogue of Industrial Energy Conservation Equipment (Product), and include energy conservation products into government procurement catalogue; as for the publicizing and using of energy conservation equipment, cash subsidy can be adopted. If any industrial companies or individuals develop innovative techniques of energy conservation and have made excellent achievement, they should be awarded. In terms of taxation, companies which produce energy-saving products and equipment can be exempted from tax.

4.3. Making Strictly Retained and Controlled Financial Policy

Financial policy to promote industrial energy conservation must be developed and implemented effectively. And low-interest or interest-free loans should be given priority to those industrial energy conservation projects and investment projects concerning products development. As for projects which do not meet the requirements of restructuring and revitalization plan of key industries and relevant industrial

policy, or do not conduct improvement or check according to regulations, financial institutions are not allowed to grant loans; if the loan has been taken, appropriate ways should be used to make correction. If projects or projects' initiators do not meet the requirement of restructuring and revitalization plan of key industries and relevant industrial policies, or do not conduct improvement or check according to regulations, they will not be allowed to conduct financing through corporate bonds, project loan, commercial paper, medium term paper, convertible loan, initial public offering and expand share by increasing capital.

4.4. Making and Implementing Technological Policy of Encouraging Technological Innovation Application

The following three aspects should be taken into consideration in making science and technological policy of industrial energy conservation: first, to encourage and support basic scientific research and applied scientific research in the field of industrial energy conservation to ensure the introduction of new energy conservation products and technologies; second, to give energy-saving inventions of industrial companies some incentives and support; third, to timely ensure the promotion and application of new technologies and new products of industrial energy conservation.

5. Conclusion

During the "Eleventh Five-Year" period, the government has paid a high administrative price in order to achieve industrial energy conservation goals. Without a long-term mechanism of industrial energy conservation, once lack of government's pressure in energy saving, then high energy consumption, high pollution industrial companies will come back soon. Thus, it is necessary to establish integral long-term mechanisms for energy conservation, including policies of industries, fiscal, finance and science and technology. And free the government from industrial energy conservation as soon as possible to reduce the administrative cost of industrial energy conservation.

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